

REMARKS

In response to the Office Action July 12, 2010, Applicants respectfully request reconsideration. Prior to entry of this Amendment, claims 2 and 4-10 were pending for examination, with claim 4 being independent claim. In this paper, no amendments have been made. Reconsideration and withdrawal of the rejection of claim 4 and all claims dependent therefrom are respectfully requested for the reasons provided below.

Claim Rejections under 35 U.S.C. §103

Claims 2 and 4-10 were rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over *Pelka* (WO 01/07828) in view of *Takato* (JP 2002072901). Applicants respectfully disagree and traverse these rejections.

Claim 4 recites a luminous body comprising
a housing having a bottom surface, inner walls and a light emission surface; and
a plurality of light sources arranged in the housing and configured to radiate light in a direction substantially parallel to the light emission surface,
wherein the inner walls reflect the light at least partly,
wherein each light source comprises an LED element and a lens body provided thereon to emit the light substantially in a direction perpendicular to an axis of the LED element, and
wherein the LED elements are inserted into the bottom surface such that the lens bodies extend through a cover plate arranged over the bottom surface (*emphasis added*).

The Office Action indicates that *Pelka* discloses all elements recited in claim 4, including “the LED elements being inserted in a bottom surface such that a body extends through a cover plate,” but fails to teach or disclose “both the LED and the lens body extending through the cover plate”. To cure this deficiency of *Pelka*, the Office action cited *Takato* because it allegedly “teaches the concept of inserting light sources into a bottom surface of a device such that they extend through a cover plate arranged over a bottom surface.” For at least the reasons set forth below, Applicants respectfully submit that this rejection is improper and should be withdrawn, because a *prima facie* case of obviousness has not been established.

It is well-established that a *prima facie* case of obviousness has three requirements. First, the prior art relied upon, coupled with the knowledge generally available in the art at the time of the invention, requires some reason that the skilled artisan would modify a reference or to combine references.¹ The Supreme Court has, however, cautioned against the use of “rigid and mandatory formulas” particularly with regards to finding reasons prompting a person of ordinary skill in the art to combine elements in the way the claimed new invention does.² Rather, the Supreme Court suggests a broad, flexible “functional approach” to the obviousness analysis recognizing that “[i]n many fields it may be that there is little discussion of obvious techniques or combinations.”³ The analysis supporting a rejection under 35 U.S.C. 103 should be *made explicit* and the reason(s) why the claimed invention would have been obvious need to be *clearly articulated*.⁴

Second, the proposed modification of the prior art must have had a reasonable expectation of success, determined from the vantage point of the skilled artisan at the same time the invention was made. In other words, a hindsight analysis is not allowed.⁵ Lastly, the prior art reference or combination of references must teach or suggest all the limitations of the claims.⁶

The Office Action Misinterpreted *Pelka*

Contrary to the statement on page 2 in the Office action, *Pelka* does not contemplate disposing LEDs 174 or optical diverters 110 such that any portion thereof extend through a reflector sheet 150. The configuration of the component parts of *the* lighting device disclosed in

¹ See *Princeton Biochemicals, Inc. v. Beckman Coulter, Inc.*, 411 F.3d 1332 (Fed. Cir. 2005) (“[S]imply identifying all of the elements in a claim in the prior art does not render a claim obvious.”).

² See *KSR Int’l Co. v. Teleflex Inc.*, 127 S. Ct. 1727 (2007) (“The obviousness analysis cannot be confined by a formalistic conception of the words teaching, suggestion, and motivation, or by overemphasis on the importance of published articles and the explicit content of issued patents.”).

³ *Id.* See also *Id.* at 1743 F. 3d 1356 (Fed. Cir. 2006) (“Our suggestion test is in actuality quite flexible and not only permits, but *requires*, consideration of common knowledge and common sense”) (emphasis in original).

⁴ See MPEP § 2143

⁵ See *Amgen, Inc. v. Chugai Pharm. Co.*, 927 F.2d 1200 (Fed. Cir. 1991) (“Hindsight is not a justifiable basis on which to find that ultimate achievement of a long sought and difficult scientific goal was obvious.”).

⁶ See *In re Wilson*, 424 F.2d 1382 (C.C.P.A. 1970) (“All words in a claim must be considered in judging the patentability of that claim against the prior art.”).

Pelka is clearly shown in Figure 2 and described in the accompanying text on page 3, line 25 through page 4, line 20. Specifically, LEDs 174 and optical diverters 110 are mounted over the sheet 150 and coupled to a printed circuit board 130 disposed underneath the sheet 150 via wires passing through the sheet 150. Figures 9-11 cited in the Office action merely schematically show the progression of light rays through the optical diverter and do not contradict the configuration shown in Figure 2.

Takato Fails to Cure Deficiencies of *Pelka*

The Office action relies on Takato to provide what *Pelka* lacks, i.e. the teaching of “the LED elements [being] inserted into the bottom surface such that the lens bodies extend through a cover plate arranged over the bottom surface,” as recited in Applicants’ claim 4. Specifically, the Office action states that “Takato teaches the concept of inserting light sources into a bottom surface of a device such that they extend through a cover plate” (emphasis added). Takato, however, fails to supplement the disclosure of *Pelka*. First, as a matter of law, to support a rejection under 35 U.S.C. 103, the prior art reference or combination of references must explicitly teach or suggest specific limitations recited in the claims, rather than vaguely identify broad “concepts” related to the claimed subject matter. What Takato actually discloses is a conventional “showerhead” structure, in which LEDs emit narrow beams of light through apertures in a reflective plate. Optical elements disclosed in Takato are primary optics that is part of the LEDs themselves, i.e. optical structures disposed over semiconductor dies. See, e.g., an abstract of Takato disclosing that “[d]ot-like light sources 14 are connected with a circuit board 15.” However, Takato is silent about the additional lens bodies extending through a cover plate, as recited in claim 4. In contrast with the device of Tanako, the claimed lens bodies are designed to further manipulate the light emitted by the LEDs, e.g. “substantially in a direction perpendicular to an axis of the LED element,” as claimed by Applicants.

Accordingly, even if properly combined, *Pelka* and *Takato* would still fail to teach or suggest every element recited in claim 4 and all claims dependent therefrom.

Proposed Combination of Pelka and Takato is Improper

The Office Action fails to *explicitly articulate*, how the disclosure of two devices with completely different patterns of light distribution would prompt skilled artisan to protrude optical diverters of Pelka through a reflective surface of Takato, without *impermissible hindsight* gleaned from Applicants' disclosure. The Office Action merely states that "[o]ne would have been motivated to make this combinations [teaching of Pelka and Tanaka] to provide an alternate illumination pattern." It unclear what is meant by "alternate illumination pattern" and why would a skilled artisan be motivated by that rationale. In fact, none of cited references recognizes the problem addressed by the claimed invention, i.e., to provide a slim flat luminaire, achieving homogeneous light distribution, while avoiding the need for a planar optical waveguide.

Therefore, for at least these reasons, claim 4 patentably distinguish over prior art of record and is allowable. Reconsideration and withdrawal of the rejection of claim 4 is therefore respectfully requested.

Dependent claims 2 and 5 - 10.

Since each of the dependent claims depends from a base claim that is believed to be in condition for allowance, Applicants believe that it is unnecessary at this time to argue the allowability of each of the dependent claims individually. Applicants do not, however, necessarily concur with the interpretation of any dependent claim as set forth in the Office Action, nor do Applicants concur that the basis for the rejection of any dependent claim is proper. Therefore, Applicants reserve the right to further address the patentability of the dependent claims in the future, if deemed necessary.

CONCLUSION

In view of the foregoing amendments and remarks, this application should now be in condition for allowance. A notice to this effect is respectfully requested. If the Examiner believes that the application is not in condition for allowance, the Examiner is requested to call the Applicants' representative at the telephone number indicated below to discuss any outstanding issues relating to the allowability of the application.

If this response is not considered timely filed and if a request for an extension of time is otherwise absent, Applicants hereby request any necessary extension of time. If there is an additional fee occasioned by this response, please charge any deficiency to Deposit Account No. 141270.

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